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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/182,933 10/30/98 REITMEIER

G SAR13070

EXAMINER

TM02/1120

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ART UNIT

PAPER NUMBER

2132

DATE MAILED:

11/20/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/182,933

Applicant(s)

Reitmeler et al.

Examiner
Douglas Meislahn

Group Art Unit
2132



☒ Responsive to communication(s) filed on Sep 5, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-18 and 22-29 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-18 and 22-29 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment filed 05 September 2000 that cancelled claims 19-21 and amended the specification and claims 1, 6-9, 11, 13-15, and 22-24. The amendments have overcome the rejections based upon 35 USC 112 and the objections.

Response to Arguments

2. Applicant's arguments filed 05 September 2000 have been fully considered but they are not persuasive.

Applicant's main argument is that Walker et al. scrambles data within an information frames while the instant invention scrambles a plurality of information frames. Walker et al.'s fractional frames read on applicant's plurality.

Applicant's arguments with respect to the advantages of the instant invention, although possible in the claimed invention, are not mandated. Please note that some of these advantages are realized through the encryption of the scrambled data, as taught by Inoue.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 13 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 13 recites the limitation "said different encryption techniques" in the third clause of the body of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 10-13, 15, 18, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. (5014310) in view of Inoue (5195134).

Walker et al. display, in lines 24-43 of column 3, a method of scrambling video data that consists of rearranging pieces of video data using an encryption keystream as a guide. The keystream corresponds roughly to applicant's index. From line 54 of column 7 through line 8 of column 8, they teach a way to prepare audio for transmission that includes compression and scrambling according to the encryption keystreams. These compressed audio samples are scrambled in the same fashion as the video. The control data precisely corresponds to applicant's index. There is no teaching of encrypting the scrambled data stream. Encrypting data that has already been scrambled, although perhaps not a ubiquitous practice, is known in the art of data transmission, as evidenced by lines 18-22 of column 3 in Inoue; the encryption has the obvious advantage of providing increased security to the data. Therefore it would have

been obvious to a person of ordinary skill in the art at the time the invention was made to encrypt the data of Walker et al. as taught by Inoue. This would increase security.

An apparatus to produce this encrypted, scrambled, compressed data stream is inherent. A method to recover the data is anticipated as well.

With respect to claim 2, Inoue has taught encryption of the entire signal, and Walker et al. have discussed putting the control data with the rest of the signal. Therefore the control data would also be encrypted. Inoue talks about subscribers in line 26 of column 3, thereby meeting the limitations of 2.

The reason behind the rejection of claims 10-12 should be apparent from Walker et al.'s distinction between audio and video data, and further view of video compression, e.g., MPEG. Claim 13 is met by the examiner's logic that has been discussed in the objection to the claim.

Regarding claim 26, Walker et al. discuss sending the encryption keystream and the video data asynchronously which results, at least temporally, in different distribution channels. This argument could also apply to claim 6, except that claim 3 more narrowly defines the channels as different mediums.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. in view of Inoue as applied to claim 2 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. Control data for the mixing is also encrypted. They do not teach sending the control data to a receiver via a different medium. Official notice is taken that it is old and well-known to send control data separately from the actual information.

This is especially established in pay television systems; a card will be sent to a client, who puts the card in a machine on the client's television. The data on the card allows the descrambling of broadcast programming. This method provides a level of security by separating the scrambled data from the key to that data. Walker et al. and Inoue are both concerned with data transmission, and therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to send control data by a different medium, such as a mailed card as is known in the art, the recipient in the combined system of Walker et al. and Inoue. This would increase security.

9. Claims 4, 5, 17, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. in view of Inoue as applied to claims 2, 3, 16, 25, and 26 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. They do not teach non-continuous temporal transmission. Official notice is taken that transmission of data, particularly encrypted data, in a non-continuous fashion is old and well-known. By providing only part of a cryptogram, an attacker (probably) cannot decrypt any of the cryptogram. This is used in the interlock protocol, which, although concerned specifically with public keys, is applicable to symmetric cryptography. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to increase the security of Walker et al. in view of Inoue by transmitting the data discontinuously. Also, if the data is transmitted as packets, it would inherently be transmitted discontinuously.

10. Claims 7, 8, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. in view of Inoue as applied to claims 1 and 28 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. There is no mention in either reference of the segments being a specific size or distributing the segments over many different distribution channels. Official notice is taken that digital broadcast over computer networks is old and well-known as a method for data transmission. Data is generally conveyed in packets which are generally the same size, meeting the limitations of claim 7. The networks use many different transmission paths to deliver data to a single source, meeting claim 29. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the teachings of Walker et al. and Inoue's joint transmission system to digital broadcast over networks.

With regard to claim 8, Walker et al. have already been cited as teaching inclusion of control data in segments.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. and Inoue as applied to claim 1 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. They do not say that a non-predicted information segment is included in the segment. Official notice is taken that it is old and well-known to include random information, such as an initialization vector, in data that is to be encoded. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include a non-predicted information frame within each

segment of Walker et al. and Inoue, thereby providing an initialization vector for the stream.

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. in view of Inoue as applied to claim 1 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. Walker et al. also show the inclusion of control data. They do not say that the step of compressing produces control information indicative of a utilization level of a decoder buffer. This feature has been interpreted as being access rights for decompression. Official notice is taken that access rights are an old and well-known type of control data that are used to indicate parties that are allowed to access a product. They are especially common in pay-television systems. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made for commonly known access rights to be included in the control data of Walker et al. and Inoue. The time of access rights generation is substantially inconsequential, but it would have been obvious to produce the rights at the same time as the operation which they control.

13. Claims 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. and Inoue as applied to claim 15 above.

Walker et al. in view of Inoue render obvious a system that compresses, mixes, and encrypts data. They do not specifically teach storing the unencrypted data in random access memory. Official notice is taken that it is old and well-known that random access storage allows a processor to directly access data. Therefore it would

have been obvious to a person of ordinary skill in the art at the time the invention was made to use random access memory to store the data used in Walker et al. because the data is not accessed in the order in which it is meant to be viewed or heard.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Meislahn whose telephone number is (703) 305-1338. The examiner can normally be reached between 9AM - 6PM, except for every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tod Swann can be reached on (703) 308-7791. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-9051 for regular communications and (703) 308-9052 for After Final communications.

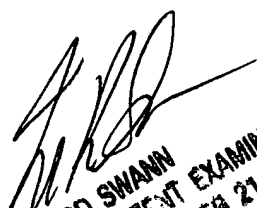
Art Unit: ~~2132~~ 2132

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Douglas J. Meislahn
Examiner
Art Unit ~~2132~~ 2132


DJM

November 16, 2000


TOD SWANN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

ATTACHMENT TO AND MODIFICATION OF
NOTICE OF ALLOWABILITY (PTO-37)
(November, 2000)

NO EXTENSIONS OF TIME ARE PERMITTED TO FILE CORRECTED OR FORMAL DRAWINGS, OR A SUBSTITUTE OATH OR DECLARATION, notwithstanding any indication to the contrary in the attached Notice of Allowability (PTO-37).

If the following language appears on the attached Notice of Allowability, the portion lined through below is of no force and effect and is to be ignored¹:

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to comply will result in ABANDONMENT of this application. ~~Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).~~

Similar language appearing in any attachments to the Notice of Allowability, such as in an Examiner's Amendment/Comment or in a Notice of Draftperson's Patent Drawing Review, PTO-948, is also to be ignored.

¹ The language which is crossed out is contrary to amended 37 CFR 1.85(c) and 1.136. See "Changes to Implement the Patent Business Goals", 65 Fed. Reg. 54603, 54629, 54641, 54670, 54674 (September 8, 2000), 1238 Off. Gaz. Pat. Office 77, 99, 110, 135, 139 (September 19, 2000).